

Support for the Amendment

Claims 1, 2, 4, 8, and 9 are cancelled in this amendment.

Claims 3 and 5-6 are amended to change dependency from now cancelled claim 2 to new claim 10.

Claim 10 is a new device claim. The language of part (a) of claim 10 is supported by original claims 1, 2, and 9; the specification from line 31, page 3 to line 10, page 5; and the drawings at FIGS 3-4. The language of part (b) of claim 10 is supported by original claim 8; the specification at page 4, lines 5-8; and the drawings at FIGS. 3-4. The language of part (c) of claim 10 is supported by original claim 4; in the specification at page 4, lines 3-5; and in the drawings at FIGS. 3-4. The language of parts (d) and (e) of claim 10 is supported in the specification at page 3, lines 25-27. This portion of the specification states that “[t]he air will create a certain overpressure in the cover 5 and escape through its slots 7 without disturbing the spray cones from the spray nozzles 3.” Parts (d) and (e) of claim 10 are also supported in the specification at page 3, lines 12-15. This portion of the specification states, in part, that “oblong holes or slots 7 enabling the spray cones from the spray nozzles to 3 leave the cover 5 undisturbed.” Parts (d) and (e) of claim 10 are also supported by the drawings at FIGS. 3-4.

Claim 11 is a new method claim. Many of the recited features of new claim 11 are similar to those cited above for new claim 10. For example, parts (a), (b), and (c) of claim 11 includes many of the features recited in parts (a), (b), (d), and (e) of claim 10. As such, claim 11 is supported by the specification, claims and drawings for the same reasons already stated in support of claim 10. Furthermore, the step identified in part (b) of claim 11 supported by the specification at page 3, lines 12-15 while the step identified in part (c) of claim 11 is supported by the specification at page 3, lines 25-27. It is noted that claim 11 does not specify a drainage hole, as is the case with part (c) of claim 10.

Entry of the Amendment is requested. Upon entry of the amendment, claims 3, 5-7, and 10-11 are currently pending in this application.

Remarks

The Examiner Jill Culler is thanked for discussing this application on July 21, 2010, and in particular for her suggestions to enhance clarity in order to distinguish over the prior art. For example, the term “without changing the spray” was suggested as being clearer than “undisturbed” or “without disturbing” in the context of maintaining an overpressure of compressed air within a nozzle cover having an opening sized to maintain the overpressure, yet without changing the spray pattern. This suggestion has been adopted.

35 U.S.C. §103(a) rejection over Schoeps et al., Lin and Tusch et al.:

In the Office Action, claims 1-5 and 8-9 stand rejected under 35 U.S.C. §103(a) over U.S. Patent No. 5,299,495 to Schoeps et al., U.S. Patent No. 5,040,457 to Lin, and U.S. Patent No. 3,788,273 to Tusch et al. This rejection is traversed.

The present invention is directed to solving the problem of spray nozzles becoming clogged by ink spray mist by providing an overpressure area around the spray nozzles that does not interfere with the spray from the spray nozzles. Claim 10 is a device claim that addresses this issue by providing for individual covers placed around each spray nozzle. Each individual cover includes a hole for receiving compressed air that creates the overpressure environment. Each individual cover also includes an end plate having an opening constructed to allow for both compressed air and the spray from the nozzle to leave the cover through the opening without the spray being changed by the end plate. Claim 11 is a method claim that also addresses this issue by providing for separate spray nozzle covers similar to those of claim 10, by generating a spray cone from each nozzle, and by generating a compressed air overpressure environment within each cover. In the method of claim 11, both the spray cone and the compressed air leave the opening of the cover without the spray being disturbed by the compressed air or the end plate in the cover.

Schoeps et al. fail to disclose or suggest the presence of an end plate and an opening within the end plate sized to maintain an overpressure region within the internal area and sized to allow a spray from the spray nozzle to leave the internal area without changing the spray according to the presently claimed invention. In contrast, Schoeps et al. are directed at a cylinder moistening assembly that includes a screen assembly between each moistening fluid spray nozzle and the cylinder to be moistened and disturbs the spray so that the cylinder receives a “a uniform

spray of the moistening fluid.” See Schoeps et al. at column 2, lines 51-68, column 3, lines 1-14, and column 5, lines 38-69 in the context of Figure 7 of Schoeps et al. As Schoeps et al. disclose a system wherein the spray is deliberately changed by the screen assembly, Schoeps et al. cannot disclose or suggest the structural feature of an opening in an end plate that allows a spray to leave a cover without being changed. Furthermore, the Office Action, at page 3, acknowledges this shortcoming of Schoeps et al.

The outstanding Office Action appears to rely upon Lin for the disclosure of an opening that does not disturb spray from a nozzle to account for the deficiencies of Schoeps et al. See the outstanding Office Action at page 3 in reference to Lin at column 3, lines 4-19, and Figure 2. However, it is first pointed out that Lin does not disclose an end plate of any type, much less an end plate having an opening within the end plate according to the presently claimed invention. Instead, Lin simply discloses spray shields 10, 11 designed to “confine the spray from the nozzle” wherein the spray shields are located along the sides of the spray. See Lin at column 3, lines 17-19 and FIG. 2. Necessarily, Lin also cannot disclose or suggest an opening within the end plate through which a spray passes unchanged, as also specified in the claims. Furthermore, it is pointed out that claims 10 and 11 specify that the opening within the end plate be sized to “maintain an overpressure region within the internal area” of the cover in addition to being sized to not change the spray from the nozzle. Even if some component of Lin were characterized as an end plate and an opening, which Applicant’s representatives do not concede, there is no teaching in Lin of an opening sized to maintain an overpressure region within the cover while also allowing the spray to pass through unchanged by the compressed air or by the end plate. As such, Lin is unable to alleviate the acknowledged and cited shortcoming of Schoeps et al., which is a cover having an end plate with an opening in the end plate sized to maintain an overpressure region and sized to allow for the spray to pass through unchanged.

Furthermore, both Lin and Schoeps et al. fail to teach or disclose an opening that is within an end plate. Instead, both Lin and Schoeps et al. show screens that form a continuous gap between them that extends the entire length of the screens and is unbounded. As such, there is no structure disclosed in either Lin or Schoeps et al. wherein an opening is actually within an end plate.

For at least the aforementioned reasons, one having ordinary skill in the art would not have looked to Lin for teaching to modify Schoeps et al. In fact, modifying Schoeps et al. by

removing the two-piece screen assembly 15 would go against the teachings of Schoeps et al. of the need for smoothing the spray pattern to provide a uniform moisture distribution on the cylinder. Furthermore, removing the two-piece screen assembly 15 from the device of Schoeps et al. would likely have the effect of removing or, at least, significantly reducing the overpressure environment around the nozzles. Clearly, such a modification would destroy the primary teaching of Schoeps et al. of providing a uniform moisture distribution on the cylinder and of providing an overpressure environment around the nozzles.

Schoeps et al. and Lin also fail to disclose or suggest a plurality of separate covers, each of which being configured to surround a spray nozzle. The Office Action, at page 2, acknowledges this shortcoming, at least with respect to Schoeps et al. However, the outstanding Office Action appears to rely upon Tusch et al. for the disclosure of an individual cover that covers a single nozzle. See the outstanding Office Action at page 2 in reference to Figure 10 of Tusch et al. It is pointed out, however, that the disclosure of Tusch et al. is not related to the technical field of the presently pending claims which is the field of printing press spray beams. Instead, Tusch et al. relate to an apparatus for applying paint or the like to a submerged surface, such as that of the hull of a ship, a sea-wall or moored buoys that is normally inaccessible except to a diver. See Tusch et al. at column 1, lines 4-15. Accordingly, there is no reason why one having ordinary skill in the art of printing press spray nozzles would have looked to Tusch et al. to solve the problem of keeping a printing press nozzle clean from the ink mist. Furthermore, Tusch et al. are unable to alleviate the already cited shortcomings of Schoeps et al. and Lin, which is a cover having an end plate with an opening in the end plate sized to maintain an overpressure region within the cover and sized to allow for the spray to pass through unchanged.

In view of the above comments, one skilled in the art would not have looked to Lin or Tusch et al. to modify Schoeps et al. to achieve the presently claimed invention. Accordingly, withdrawal of the prior art-based rejection over Schoeps et al., Lin and Tusch et al. is requested.

35 U.S.C. §103(a) rejection over Schoeps et al., Lin, Tusch et al. and Marsden:

The outstanding Office Action includes a rejection of claims 6 and 7 under 35 U.S.C. §103(a) over Schoeps et al., Lin, Tusch et al. and U.S. Patent No. 2,448,226 to Marsden. This rejection is traversed.

As stated previously, Schoeps et al., Lin and Tusch et al. fail to teach or suggest a device or method for keeping a plurality of spray nozzles clean wherein separate covers surround each spray nozzle, the covers each having an end plate and an opening within the end plate that is sized to maintain an overpressure region within the cover and sized to allow for the spray to pass through unchanged. Marsden fails to cure these defects identified above with respect to Schoeps et al., Lin and Tusch et al. From the outstanding Office Action at page 7, it appears that Marsden is relied upon for disclosing a spray valve for a spray nozzle, G, provided with an internal air conduit 45 and an air bore 46 connected to the cover, wherein the air bore has such a diameter that a throttling effect is obtained. See Marsden at column 4, lines 45-62, and Figure 3. It is submitted that this in no way teaches modifying either Schoeps et al., Lin or Tusch et al. to achieve the presently claimed invention.

In view of the above comments, the claimed invention would not have been obvious from Schoeps et al, Lin, Tusch et al. and Marsden. Accordingly, withdrawal of the rejection is requested.

It is believed that this application is in condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

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